IWA PUBLISHING

Search... This Journal Advanced Search

Journal of
Water, Sanitation & Hygiene for Development

ISSUES JOURNAL INFORMATION LIBRARIANS OPEN ACCESS BOOKS ABOUT

Select Language

Article Navigation

RESEARCH ARTICLE | NOVEMBER 26 2015

The development of an onsite sanitation system based on vermifiltration: the 'Tiger Toilet'

C. Furlong; W. T. Gibson; M. R. Templeton; M. Taillade; F. Kassam; G. Crabb; R. Goodsell; J. McQuilkin; A. Oak; G. Thakar ... Show more

Check for updates

Journal of Water, Sanitation and Hygiene for Development (2015) 5 (4): 608–613.
https://doi.org/10.2166/washdev.2015.167 **Article history**

Views Share Tools

This paper describes the development of a novel onsite sanitation system based on vermifiltration, the 'Tiger Toilet'. Initial laboratory experiments demonstrated that feed distribution was not required, a worm density of 2 kg/m^2 could be used, worms preferred wetter environments, and system configuration did not affect effluent quality. Installing the first prototype in the UK proved that the process functioned when scaled, i.e., chemical oxygen demand and thermotolerant coliform reduction were found to be comparable with the laboratory results. Ten prototypes were then tested by households in rural India; all were working well after six months. The vermifilters were processing the amount of faeces entering the system on a daily basis, so faeces was not accumulating. It was estimated that they would require emptying after approximately five years, based on the depth of the vermicompost generated. With further development, it is believed that the Tiger Toilet has the potential to become a superior form of onsite sanitation, when compared with traditional onsite sanitation technologies.

Keywords: *Eisenia fetida*, faecal sludge, India, sewage, worms

© IWA Publishing 2015

You do not currently have access to this content.

Sign in

Don't already have an account? Register

Client Account

Email address / Username

Password

Sign In

Reset password
Register

Buy This Article

Impact Factor 1.250

CiteScore 1.9 • Q2

View Metrics

Cited by

Web Of Science (5)

Google Scholar

CrossRef

Subscribe to Open

This paper is Open Access via a Subscribe to Open model. Individuals can help sustain this model by contributing the cost of what would have been author fees. Find out more here.

SUPPORT

Journal of
Water, Sanitation & Hygiene for Development

ISSN 2043-9083 EISSN 2408-9362

IWA Publishing
Republic – Export Building, Units 1.04 & 1.05
1 Clove Crescent
London, E14 2BA, UK

Telephone: +44 207 654 5500
Fax: +44 207 654 5555

Cookie Policy Terms & Conditions Privacy Site Map Get Adobe Acrobat Reader

©Copyright 2021 IWA Publishing